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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/775,825

02/10/2004

David Paul Yach

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EXAMINER

TIMBLIN, ROBERT M

ART UNIT

PAPER NUMBER

2167

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DELIVERY MODE

06/01/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/775,825	YACH ET AL.	
	Examiner	Art Unit	
	Robert M. Timblin	2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action corresponds to application 10/775,825 filed on 02/10/2004.

Response to Amendment

Acknowledgement has been made with respect to the amendments of claims 1, 5, and 15.

Accordingly, claims 1-20 remain pending.

Claim Objections

Applicant's amendments to claim 5 have been accepted obviate the objection thereto.

Accordingly, the claim objection has been withdrawn.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Huang et al.** ('Huang' hereinafter) (U.S. Patent 5,966,714) in view of **Multer et al.** (hereinafter **Multer**, US 7,035,878).

Regarding claim 1, **Huang** discloses in a radio communication system (see column 1, lines 19 – 20 “...in particular cellular telephones...”) having a network part at which a network-copy database [master address book] is maintained and a mobile node at which a mobile-copy database [subset] is maintained (see column 4, lines 20 – 25 “The present invention stores a subset of a given large address book (also referred herein as a master address book) locally on a SmartPhone, or any other client device such as a PDA to decrease connection time and enhance responsiveness to E-mail address requests.” And see column 5, lines 43 – 45 “PIM 120, Mailbox 124 and MAB 126 may reside on network server 127 instead of on host PC 102.” In other words, this is the network copy database.), an improvement of apparatus for facilitating placement of data stored at a selected one of the network-copy database and mobile-copy database into a form to facilitate efficient communication thereof pursuant to a synchronization session (See column 2, lines 10 – 15 “Therefore it is desirable to have a method and an apparatus...to provide an efficient method for keeping the personal address books synchronized with a main database.”), said apparatus comprising:

a change list maintained at least at a selected one of the network part and the mobile node and associated with a corresponding selected one of the network-copy database and the mobile-copy database, said change list containing a history of changes made to the corresponding selected one of the network-copy database and the mobile-copy database (See column 12, lines 25 – 27 “In step 391, changes to DAB and DABI are queued up until a connection is made between the two.” DAB and DABI represent the different databases – one on the network side and one on the mobile device.);

a change-list coordinator adapted to receive indications of changes made to the corresponding selected one of the network-copy database and the mobile-copy database (See column 8, lines 35 – 37 “Change Detection mechanism 230 detects the changes which have occurred to a given mail box since the last synchronization.”), said change-list coordinator for coordinating the history of changes contained in said change list such that the history of changes includes non-redundant change listings (See column 10, line 64 – column 11, line 2 “First, a modification that indicates the mail address is adjusted and then a modification that indicates that the phone number is adjusted are made. The end results is as though both changes occurred. However, it should be noted that if two changes are made to the same field, only the latter of the two changes will be of effect.” The last part of the quote is interpreted to represent the non-redundancy part of the claim.)

Huang fails to expressly disclose a formatter, which formats a change entry in the change lists to include a tag length indicator, which indicates the change entry’s length.

Multer, however, discloses a formatter, which formats a change entry in the change lists to include a tag length indicator, which indicates the change entry’s length (col. 20 line 58-65, col. 23 lines 20 and 28, and col. 25 lines 41-52) to use an efficient format with tags to represent content objects.

In the same field of endeavor, (i.e. synchronizing change logs), it would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because Multer would have given Huang an efficient format with tags to represent content objects for the benefit of allowing processing

to occur using a minimum of bandwidth and storage in devices with limited storage and processing power.

Regarding claims 2 and 16, **Huang** teaches wherein data maintained at the network-copy database and at the mobile-copy database is formatted into data records (See FIG 1d showing the different records formatted into rows), each data record formed of at least one data field (See FIG 1d, with fields being represented by the columns), and wherein said change list coordinator coordinates the history of changes such that, for any data record, the change listings note changes, if any, to the at least one data field of the data records (See column 8, lines 35 – 37 “Change Detection mechanism 230 detects the changes which have occurred to a given mail box since the last synchronization.”).

Huang does not explicitly disclose excluding data fields of the data records that are absent changes.

However **Multer** discloses excluding data fields of the data records that are absent changes. (See column 28, line 40 – 41 “...so a new data package or the change log, CONT.D002, is created and uploaded to network...” and see column 28, lines 51 - 54 “In addition, data package CONT.D002 includes the field to be modified, in this example, ‘phone,’ and the new information, in this example John Smith’s new phone number.” Here, the only fields that are being transferred are the ones of the record that have changes – thus, fields absent changes are excluded.)

It would have been obvious to one with ordinary skill in the art at the time of the invention to combine the references because both are related to synchronizing databases using a change

log, and by including the exclusion of fields [records] that have not been modified, the synchronization may be performed more rapidly as was commonly known in the art at the time of the invention and also because it will use less bandwidth and take up less space, as was disclosed in **Multer** – see column 3, lines 14 – 15 “These objectives include speed, low bandwidth, accuracy, and platform independence.” It is for this reason that one of ordinary skill in the art would have been motivated to include the excluding data fields of the data records that are absent changes.

Regarding claims 3 and 17, the combination of **Huang** and **Multer** discloses wherein said change list coordinator coordinates the history of changes such that the change listings note, for each data record containing a change, a single resultant data record, in which changes, if any, are cumulated and the single-resultant data record is formed as a result thereof. (See **Multer**, column 3, lines 48 – 50 “A combined data package is thus defined having a combined transaction with the identification number. The second data package is replaced with the combined data package.” This represents the single-resultant data record that is formed as in the claim.)

Regarding claims 4 and 18, the combination of **Huang** and **Multer** discloses wherein the changes to at least one data record comprise a first change to a selected data field thereof and a second change to the selected data field, and wherein the single resultant data record is formed of a cumulated result of the first change and the at least the second change. (See **Huang** column 10, line 67 – column 11, line 2 “However, it should be noted that if two

changes are made to the same field, only the latter of the changes will be of effect.” This is interpreted to mean that the second change would be the cumulated result because whether the field was edited, deleted, added etc., in the first change, the cumulated result would still be whatever was in the second change for any of these situations.)

Regarding claims 5 and 19, the combination of **Huang** and **Multer** discloses wherein the second change negates the first change and wherein said change-list coordinator further coordinates the history of changes contained in said change list to prevent inclusion of changes in the change list that negate one another. (See **Multer** column 29, lines 45 – 60, where it is specifically mentioned superfluous information being deleted, then giving an example of a Add command followed by a delete. Here, the repetition of “to prevent inclusion in the change list” is interpreted as an accidental typo and is ignored.)

Regarding claim 6, the combination of **Huang** and **Multer** discloses the changes to at least one data record comprise a first change to a first selected data field [mail address] thereof and a second change to a second selected data field [phone number] thereof, and wherein the single resultant data record is formed of the first selected data field and the second selected data field. (See **Multer**, column 30, lines 40 – 59 where this scenario of combining changes into one is described as the changes being collapsed into a new data package.)

Regarding claim 7, the combination of **Huang** and **Multer** discloses the single resultant data record comprises solely the first selected data field and the second selected data field. (See **Multer**, column 30, lines 40 – 59 where only the single fields that are changed are part of the data record.)

Regarding claim 8, the combination of **Huang** and **Multer** discloses the history of changes contained in said change list and coordinated by said change list coordinator are formatted to be free of null terminated values. (See **Huang**, column 14, lines 64 – 67 “The details on how to implement the importation and exportation to and from application using published formats are application specific and well understood by those skilled in the art.”)

Regarding claims 9 and 20, the combination of **Huang** and **Multer** discloses said change list coordinator further comprises a formatter, said formatter for formatting each change listing of the history of changes contained in said change list to be of a selected format. (See **Huang**, column 14, lines 54 – 63.)

Regarding claim 10, the combination of **Huang** and **Multer** discloses the selected format by which the formatter of said change list coordinator formats each change listing includes a tag length encoding format. (See **Multer**, column 11, line 8 – 10 “The size of the AOS will depend on the data being collected by each device engine.”)

Regarding claim 11, the combination of **Huang** and **Multer** discloses each change listing is of at least a first selected change-type of a set of change-types, the change-type defining a tag, the tag contained in the change listing when formatted pursuant to the tag length encoding format. (See **Multer** column 25, line 41 – 53)

Regarding claim 12, the combination of **Huang** and **Multer** discloses each change listing is of a selected listing length, the history when formatted pursuant to the tag length encoding format. (See **Multer**, column 25, lines 62 – 63)

Regarding claim 13, the combination of **Huang** and **Multer** discloses said change listing is free of terminator values separating separate ones of the change listings thereof. (See **Multer** Column 25, lines 62 – 63. If the length is kept to the size of the field, it is interpreted that no terminator will be needed.)

Regarding claim 14, the combination of **Huang** and **Multer** discloses said change listing is of a selected maximum size. (See **Multer** column 29, lines 13 – 16)

Regarding claim 15, **Huang** discloses in a method of communicating in a radio communication system (see column 1, lines 19 – 20 “...in particular cellular telephones...”) having a network part at which a network-copy database [master address book] is maintained and a mobile node at which a mobile-copy database [subset] is maintained (see column 4, lines 20 – 25 “The present invention stores a subset of a given large address book (also

referred herein as a master address book) locally on a SmartPhone, or any other client device such as a PDA to decrease connection time and enhance responsiveness to E-mail address requests.” And see column 5, lines 43 – 45 “PIM 120, Mailbox 124 and MAB 126 may reside on network server 127 instead of on host PC 102.” In other words, this is the network copy database.), an improvement of method for facilitating placement of data stored at a selected one of the network-copy database and mobile-copy database into a form to facilitate efficient communication thereof pursuant to a synchronization session (See column 2, lines 10 – 15 “Therefore it is desirable to have a method and an apparatus...to provide an efficient method for keeping the personal address books synchronized with a main database.”), said method comprising:

coordinating a history of changes indicative of changes to a selected one of the network copy database and the mobile copy database such that the history of changes includes only non-redundant change listings (See column 10, line 64 – column 11, line 2 “First, a modification that indicates the mail address is adjusted and then a modification that indicates that the phone number is adjusted are made. The end results is as though both changes occurred. However, it should be noted that if two changes are made to the same field, only the latter of the two changes will be of effect.” The last part of the quote is interpreted to represent the non-redundancy part of the claim.); and

placing the history of changes coordinated during said operation of coordinating into a change list maintained at a corresponding one of the network part and the mobile node (See column 12, lines 25 – 27 “In step 391, changes to DAB and DABI are queued up until a connection is made between the two.” DAB and DABI represent the different databases –

one on the network side and one on the mobile device.), corresponding to the network copy database and the mobile copy database of which the history of changes is indicative (See column 8, lines 35 – 37 “Change Detection mechanism 230 detects the changes which have occurred to a given mail box since the last synchronization.”).

Huang fails to expressly disclose appending an identifier to the change list, which identifies the length of an entry in the change list.

Multer, however, discloses appending an identifier to the change list, which identifies the length of an entry in the change list (col. 20 line 58-65, col. 23 lines 20 and 28, and col. 25 lines 41-52) to use an efficient format with tags to represent content objects.

In the same field of endeavor, (i.e. synchronizing change logs), it would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because Multer would have given Huang an efficient format with tags to represent content objects for the benefit of allowing processing to occur using a minimum of bandwidth and storage in devices with limited storage and processing power.

Response to Arguments

Applicant's arguments filed 3/12/2007 have been fully considered but they are not persuasive.

Applicant argues on pages 7-8 of the remarks that Huang does not teach or suggest keeping a history of database changes. Applicant further provides a citation of Huang (i.e. column 15, lines 18-24) to support their argument. This argument has been considered, however it is found to be unpersuasive as indicated below:

The Examiner submits that Huang merely teaches truncating a log so that a *traditional log of all* activities (emphasis added) is avoided. Later in column 15 (e.g. lines 29-32), Huang discloses it is necessary to use truncation to reduce the amount of storage desired for the Change List in memory limited devices.

The Examiner further submits that by maintaining a log keeping recent changes, a history of changes (i.e. recent changes) is still taught. Specifically, Huang teaches a [truncated] log containing recent changes rather than having a history of all changes. Respectfully, this log sufficiently teaches the claimed "...change list containing a history of changes..." because a log is well known in the art to contain events that have been committed (see at least figures 4b-d of Huang). Therein it is indicated that recent (i.e. history of) changes have been recorded.

Both the independent claims have been amended to include a tag length indicator, which indicates the change entry's length. The Examiner respectfully submits Multer teaches this feature as presented in the Office Action above (see rejection of claims 1 and 15).

Cited Prior Art

U.S. Patent Application 20030037020 to Novak et al. The subject matter disclosed therein pertains to the pending claims (i.e. synchronizing change lists).

U.S. Patent Application 20030004955 to Cedola et al. The subject matter disclosed therein pertains to the pending claims (i.e. synchronizing change lists).

U.S. Patent 7,158,985 to Liskov. The subject matter disclosed therein pertains to the pending claims (i.e. synchronizing change lists).

U.S. Patent 6,925,476 to Multer et al. The subject matter disclosed therein pertains to the pending claims (i.e. synchronizing change lists).

U.S. Patent 6,968,209 to Ahlgren et al. The subject matter disclosed therein pertains to the pending claims (i.e. synchronizing change lists).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert M. Timblin whose telephone number is 571-272-5627. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Cottingham can be reached on 571-272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Robert M. Timblin



Patent Examiner AU 2167

5/25/2007



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